

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for forming a recipe for de-skewing wafers, comprising:

learning a first pattern at a de-skew site on a first wafer layer;

saving the first pattern and its location in a recipe for de-skewing wafers
multiple wafer layers;

learning a second pattern at the de-skew site on a second wafer layer;

and

saving the second pattern in the same recipe ~~for de-skewing wafers.~~

2. (Original) The method of claim 1, wherein said learning the first pattern comprises determining a score of uniqueness for the first pattern.

3. (Original) The method of claim 2, wherein said saving the first pattern is performed when the score of uniqueness is greater than a threshold value.

4. (Previously Presented) The method of claim 1, further comprising comparing the first pattern to the second pattern at the de-skew site on the second wafer layer before said learning the second pattern.

5. (Previously Presented) The method of claim 4, wherein said comparing comprises determining a score of similarity between the first pattern and the second pattern at the de-skew site.

6. (Original) The method of claim 5, wherein said learning the second pattern is performed when the score of similarity is less than a threshold value.

7. (Original) The method of claim 1, wherein said learning the first pattern comprises:

removing a feature of the first pattern;

determining a score of uniqueness for the first pattern without the
feature, wherein said saving the first pattern comprises saving the first pattern
without the feature if the uniqueness score exceeds a threshold value.

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8. (Original) The method of claim 1, wherein said saving the first pattern in the recipe comprises saving a file name of a file including the first pattern.

9. (Previously Presented) A method for forming a recipe for de-skewing wafers, comprising:

learning a pattern of a de-skew site on a wafer layer;
saving the pattern in a recipe for de-skewing wafers;
dividing additional wafer layers into a first plurality of wafer layers where the de-skew site can be recognized using said pattern and at least one wafer layer where the de-skew site cannot be recognized using said pattern;
learning an additional pattern of the de-skew site on said at least one wafer layer, wherein said at least one wafer layer can be recognized using said additional pattern; and
saving the additional pattern in the same recipe for de-skewing wafers.

10. (Original) The method of claim 9, wherein said at least one wafer layer comprises a second plurality of wafer layers, the method further comprising repeating said dividing, said learning, and said saving until there are no wafer layers in the second plurality of wafer layers.

11. (Original) The method of claim 9, further comprising receiving instructions from a user on which pattern to learn prior to said learning pattern.

12. (Original) The method of claim 9, wherein said at least one wafer layer comprises a second plurality of wafer layers, the method further comprising receiving instructions from a user on which pattern of the de-skew site of said the second plurality of wafer layers to learn prior to said learning the additional pattern.

13. (Original) The method of claim 9, wherein said learning pattern comprises saving the pattern having a score of uniqueness above a threshold.

14. (Original) The method of claim 9, wherein the first plurality of wafer layers can be recognized using said recipe if the pattern has scores of similarity with said de-skew site on the first plurality of wafer layers above a threshold.

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15. (Original) The method of claim 9, further comprising repeating learning the pattern, said saving the pattern, said dividing additional wafer layers, said learning an additional pattern, and saving the additional pattern for another de-skew site.

16. (Original) The method of claim 9, wherein said saving the pattern comprises saving in the recipe a file name of a file including the pattern.

Claims 17-21 (Cancelled)

22. (Previously Presented) A method comprising:

forming a recipe for de-skewing wafers comprising:

learning a first pattern at a de-skew site on a first wafer layer;

saving the learned first pattern in the recipe for a plurality of wafer layers; and

determining that the learned first pattern matches a second pattern at the de-skew site on a second wafer layer;

the method further comprising using said first pattern to de-skew a wafer by comparing the learned first pattern to the first pattern at the de-skew site on the first wafer layer of the wafer and using said first pattern to de-skew the wafer at a later time by comparing the first pattern to the second pattern at the de-skew site on the second wafer layer of the wafer.

Claim 23 (Cancelled)

24. (Previously Presented) The method of claim 1, wherein said first wafer layer is a top surface of said wafer and said second wafer layer is the top surface of said wafer after said wafer is processed.

25. (Previously Presented) The method of claim 22, wherein said first wafer layer is a top surface of said wafer and said second wafer layer is the top surface of said wafer after said wafer is processed.

26. (Previously Presented) The method of claim 1, further comprising:

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comparing the first pattern to a third pattern at the de-skew site on a third wafer layer;
and
saving the first pattern and its location in the recipe for de-skewing wafers having the
third wafer layer as the top layer.

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